

23. (Amended) A gas turbine gas generator operable with a fuel source, the gas generator comprising:

- an air compressor;
- a turbine;
- a shaft assembly interconnecting the air compressor and the turbine;
- and a combustor operatively connected to provide combustion gases to the turbine;

*a<sup>3</sup>*

wherein the engine further includes one or more premixers each having

- (1) a mixing tube configured for receiving and mixing the fuel and air, the mixing tube having an axis and an exit for discharging a fuel/air mixture to the combustor; and
- (2) a mixture valve associated with said mixing tube exit and including inner and outer valve members that define an exit flow area;

wherein the defined exit flow area includes at least two segmented, substantially opposed area portions with respect to angular position about the mixing tube axis;

wherein the segmented area portions include ports for directing the discharged fuel/air mixture relative to the mixing tube axis; and

wherein at least one of said inner and outer valve members is movable relative to the other of said valve members to selectively vary the defined exit flow area with respect to time.

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Please add the following new claims:

*28*

27. (New) A gas turbine gas generator for combusting fuel and air comprising:

*Rule*

*126*

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a combustion chamber; and  
a premixer having an exit in flow communication with the combustion chamber for mixing the fuel and air to provide a fuel/air mixture,  
wherein the premixer further comprises a controllable mixture valve associated with the premixer exit and having first and second valve members that together define an exit flow area,  
wherein at least one of said first and second valve members is movable relative to the other of said valve members to selectively vary the defined exit flow area and a fuel/air mixture velocity.

*at* Rule 126

*a5*

<sup>29</sup> 28. (New) The gas turbine gas generator as in claim <sup>28</sup> 27 wherein the combustion chamber is a single stage combustion chamber.

<sup>30</sup> 28. (New) The gas turbine gas generator as in claim <sup>28</sup> 27 wherein the premixer includes a mixing tube having an axis, and wherein the fuel/air mixture is deflected away from the mixing tube axis by said valve.

<sup>31</sup> 30. (New) A method of controlling the velocity of a fuel/air mixture introduced to the combustion chamber of a gas turbine gas generator from a fuel/air premixer, the premixer having an exit in flow communication with the combustion chamber, the method comprising:  
providing a controllable mixture valve associated with the premixer exit, the valve including first and second valve members that together define an exit flow area;  
flowing the fuel/air mixture into the gas turbine gas generator combustion chamber through the valve; and

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